REMARKS

Claims 3, 6-9, 11-25, and 27-28 are pending in the application. Claims 10 and 26 are canceled herein.

Claim 13 is amended to be change the dependency to Claim 24, in view of the cancellation of Claim 10. No new matter is introduced.

Claim 24 is amended to incorporate the subject matter of Claim 26, which is canceled. No new matter is introduced.

Rejections Under 35 U.S.C. § 103

The Examiner has rejected different combinations of claims under 35 U.S.C. § 103(a) as having been unpatentable over Jonas et al., U.S. Patent 5,300,575 ("*Jonas*"), in view of Han et al., U.S. Patent 5,185,100 ("*Han*"), and further in view of *Niu*, U.S. Patent 6,205,016 ("*Niu*"), Stroetmann et al., U.S. Patent 5,554,179 ("*Stroetmann*") or Facci et al., U.S. Patent 5,258,461 ("*Facci*"), or in view of the evidence set forth in Hsu et al., U.S. Published Application 2005/0222333 ("*Hsu*"). For each of the independent claims, Claims 14 and 24, the rejections will be addressed with respect to the combination of *Jonas* and *Han* first, and then with respect to the combination with the other references. Because the independent claims are directed to novel and non-obvious subject matter, the pending dependent claims are likewise novel and non-obvious.

(1) Claim 14

Claim 14 is drawn to a method. The method comprises:

polymerizing a pyrrole or thiophene monomer is the presence of at least one colloid-forming polymeric acid in an aqueous liquid medium;

removing an amount of aqueous liquid medium to form partially dried solids; and

dispersing the partially dried solids in an organic liquid.

Jonas discloses dispersions of polythiophenes in the presence of polyanions. The dispersions can be used to form antistatic coatings on plastic moldings. *Han* discloses electrically conductive polymers having conjugated backbones, which are doped with one or more non-oxidizing protonic acids. The polymers can be polythiophene or polypyrrole. The preformed polymers are treated with the doping acid in the solid state or in solution. The Examiner has indicated that *Jonas* describes Applicants' process except for the polypyrrole. *Han* is cited for the disclosure of polypyrrole.

Applicants respectfully submit that there is no teaching or suggestion of Applicants' process as recited in Claim 14 in *Jonas*. The Examiner has pointed to column 4, lines 50-55 of *Jonas*, stating:

> it is disclosed by Jonas that after drying or in other words the removal of water, which would inherently include drying the polymerized dispersion to a partially dried solid state, the polythiophene dispersion including the organic solvent are applied to plastic moldings in layers to be antistatically treated.

Applicants respectfully submit the above statement is not a correct interpretation of what is actually stated in *Jonas*, and furthermore, the Examiner's characterization of *Jonas* is not the same as Applicants' process. The passage at column 4, lines 50-55, of *Jonas*, states that the polythiophene dispersions are applied to plastic moldings and, after drying, have a thickness of 0.001 to 100 μm. It does not state the the polythiophene dispersions are dried and then applied to the moldings. This is further made clear in the paragraph which follows (column 4, lines 56-62 of *Jonas*) where it states that "[a]fter application of the solutions, the solvent may be removed simply by evaporation at room temperature." It is clear that drying takes place after the polythiophene dispersions or solutions are coated onto the plastic moldings.

Furthermore, even if one were to interpret *Jonas* to mean that the polythiophene dispersion/solution is partially dried before coating, and even if one were to assume that the partially dried coating contained organic solvent, this is not the same as Applicants' process. There is no teaching or suggestion in *Jonas* of removing an amount of aqueous liquid medium to form partially dried solids, and then dispersing the partially dried solids in an organic liquid. *Han* also discloses that films can be formed and dried. But *Han* does not teach or suggest forming partially dried solids of polypyrrole, polythiophene, or any other kind, and dispersing them in an organic liquid.

With respect to dependent Claim 21, *Niu* is cited as disclosing additional components such as carbon nanoparticles. *Niu* is directed to composite electrodes for use in electrochemical capacitors. The composite electrodes are prepared from carbon nanotubes and "electrochemically active materials". Conductive polymers are listed as one type of electrochemically active material. The Examiner has stated that it would have been obvious to use *Niu*'s electrochemically active materials in the method of *Jonas* in view of *Han*. Applicants can find no motivation to add one component of the electrode of *Niu* to the antistatic compositions of *Jonas*. However, even with the addition of these materials, one does not arrive at Applicants' claims method as recited in Claim 14 and dependent Claim 21.

With respect to dependent Claims 18 and 20, *Facci* has been cited as disclosing the solvent. *Facci* is drawn to polymer blends in a mix of solvents, and films formed with the blends. The list of possible solvents in column 8 of *Facci* includes those of Applicants' Claim 20. However, the list of possible polymers in *Facci* does not include polythiophenes, polypyrroles or polymeric acids, as recited in Applicants' claims. *See Facci* column 7, line 35, to column 8, line 17. Furthermore, there is no teaching or suggestion in *Facci* of

Applicants method, as recited in Applicants' Claim 14. Applicants further submit that one of ordinary skill in the art combine the teaching of *Facci* with *Jonas* or *Han*.

Applicants respectfully submit that the method, as recited in Claim 14, and the Claims dependent thereon, is neither taught nor suggest by *Jonas* in view of *Han*, and further in view of either *Niu* or *Facci*.

Applicants repsectfully request that the rejection be withdrawn with respect to Claim 14, and the Claims dependent thereon.

Claim 24

Claim 24 is directed to a composition. The claim, as amended herein, recites a composition comprising at least one polythiophene or polypyrrole and at least one colloid-forming polymeric acid, dispersed in a liquid medium, which is at least 60% by weight of an organic liquid, and wherein the colloid-forming polymeric acid is a polymeric sulfonic acid which is fluorinated.

As discussed above with respect to Claim 14, *Jonas* discloses dispersions of polythiophenes in the presence of polyanions. *Han* discloses electrically conductrive polymers doped with one or more non-oxidizing protonic acids. There is no teaching or suggestion of colloid-forming acids which are fluorinated polymeric sulfonic acids in either *Jonas* or *Han*, individually or collectively.

With respect to dependent Claims 13 and 26, the subject matter of which is now incorporated in Claim 24, *Stroetmann* is cited as disclosing perfluoroalkylene sulfonic acid. *Stroetmann* discloses an implantable defibrillator electrode in which the conductive electrode, i.e., Pt or Pt/Ir, is completely embedded in or surrounded by a "biocompatible, hydrophilic, electrolytically conductive polymer". One example of the polymer is poly(perfluoroalkylene)sulfonic acid. Applicants respectfully submit that there is no reason to combine the teaching of *Stroetmann* with either *Jonas* or *Han*. One of ordinary skill in the art would not add the membrane surrounding the metal electrode in the defibrillator of *Stroetmann* to the antistatic coating of *Jonas* or to the conductive polymer composition of *Han*. The Examiner has stated that it would have been obvious to do so "because perfluoroalkylenesulfonic acid is a cation exchanger keeps the surface of an electrode free of negatively charged macromolecules...which is a desirable effect...." Applicants can find no teaching or suggestion in either *Jonas* or *Han* that negatively charged macromolecules need to be kept from the surface of anything. Furthermore, this is a desireable effect in *Stroetmann* because "[a]s a result, the removal of the electrode after a given period of implantation is simpler." (Column 2, lines 31-32 of *Stroetmann*). There is no need for electrode removal after implantation in either *Jonas* or *Han*.

Hsu was cited as providing evidence that the polymeric sulfonic acids of *Jonas* are colloid-forming. Applicants respectfully traverse this statement. Hsu discloses that some

colloid-forming polymeric acids are sulfonic acids. The reference does not state that all polymeric sulfonic acids are colloid forming. Furthermore, *Hsu* is commonly owned with the present application, and was both filed and published after the present application. Thus it should not be used as citable art against the pending claims.

Niu and *Facci* were cited in combination with *Jonas* in view of *Han* against Claims 12 and 13, respectively. For all the reasons stated above with respect to the method of Claim 14, the combination of references does not teach Applicants' composition as recited in Claims 12 and 13. Furthermore, neither of the references teaches fluorinated polymeric sulfonic acids as recited in amended Claim 24, from which Claims 12 and 14 depend.

Applicants repsectfully request that the rejection be withdrawn with respect to Claim 24, and the Claims dependent thereon.

Conclusion

In view of the foregoing amendments and remarks, Applicants submit that the above referenced pending application is in condition for allowance. A Notice of Allowance for Claims 3, 6-9, 11-25, and 27-28 is earnestly solicited.

Respectfully submitted,

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